

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

The Amendment filed on February 21, 2011 in this application explained that the bent glass sheet tempering apparatus recited in independent Claims 1 and 21 differs from the apparatus that would result from a combination of the disclosures in Frank, Black and Gardon -- the resulting apparatus would not include mutually inclined quench nozzles providing diverging jets of quench gas.

The Advisory Action issued on March 1, 2011 in this application expresses the view that the wording in Claims 1 and 21 defining the mutually inclined quench nozzles providing diverging jets of quench gas can be broadly interpreted to include the arrangement of nozzles disclosed in Frank.

In view of that observation, and in order to advance prosecution of this application, submitted with this Amendment are amended versions of Claims 1 and 21 in which this arrangement of the quench nozzles is defined in a slightly different manner. The independent claims recite that the quench nozzles of each plenum are inclined so that the axes of some of the nozzles of each plenum are inclined to one side of the plenum relative to a vertical plane containing the longitudinal centerline of the plenum and the axes of others of the nozzles in each plenum are inclined towards the opposite side of the plenum relative to the vertical plane containing the longitudinal centerline of the plenum to provide the diverging jets of quench gas.

The claimed arrangement of the quench nozzles is not disclosed in Frank. Even accepting that the nozzles at the far opposite ends of Frank's nozzle bar 57 might be said to be inclined in some respects, there is no disclosure of the inclined

arrangement recited in the independent claims. Accordingly, all of the claims in this application are patentably distinguishable over a combination of the disclosures in Frank, Black and Gardon.

In the discussion about the inclined quench nozzles, the aforementioned Advisory Action also refers to the disclosure in U.S. Patent No. 4,515,622 to McMaster et al. (McMaster). This reference was previously applied by the earlier Examiner handling this application, and was discussed in the Amendment filed on January 28, 2009. As discussed in that paper, McMaster discloses two quite different embodiments of a glass sheet quench. One embodiment shown in Figs. 1-4 and 7 and is specifically constructed to quench flat glass sheets. The other embodiment is illustrated in Figs. 5, 6 and 8 and is specifically configured to quench bent glass sheet.

The wording in the independent claims of the present application makes clear that the claimed apparatus at issue here is a bent glass sheet tempering apparatus, not a flat glass sheet tempering apparatus. It is understood that the reference in the Advisory Action to McMaster is a reference to the second embodiment of the apparatus illustrated in Figs. 5, 6 and 8 for quenching bent glass sheet.

This second embodiment of utilizes straight plenums extending parallel to the direction of conveyance of the bent glass sheet. The previous Response explained that Figs. 6 and 8 in McMaster may be thought to depict a curved array of nozzles, but that is not so. Figs. 6 and 8 seem to depict curved ray of nozzles only because of the orientation in which the straight plenums are mounted in the frame of the blasthead. This method of producing the illustrated array of nozzles is only possible when the plenums are parallel to the direction of conveyance. Otherwise, the

blastheads must be so far apart to allow the shuttle to pass between them that affective quenching is not possible to achieve. In addition, the discussion at column 4 of McMaster states that the quench construction is physically intended to simplify construction by permitting the use of straight plenums. The discussion in lines 48-52 of column 7 and in lines 19-22 of column 8 also express a similar focus on the use of straight plenums.

As mentioned above, independent Claims 1 and 21 here define that the bent glass sheet tempering apparatus at issue here includes, in combination with the other claimed features, plenums extending transverse to the direction of conveyance of the bent glass sheet, a curved array of quench nozzles, and an orientation of the quench nozzles such that axes of some of the nozzles are inclined to one side of the plenum (relative to the vertical plane containing the longitude centerline of the plenum) and axes of others of the nozzles are inclined to the opposite side of the plenum (relative to such vertical plane containing longitude centerline of the plenum). This combination and arrangement of the plenums and the nozzles in each plenum is not disclosed in McMaster.

More specifically, the record does not provide sufficient findings of fact establishing that a person of ordinary skill in the art, aware of the disclosures in Frank, Black , Gardon and McMaster, would have found it obvious to construct a bent glass sheet tempering apparatus in the manner recited in independent Claims 1 and 21. Accordingly, withdraw of the rejections of record and allowance of this application are earnestly solicited.

The dependent claims define additional distinguishing aspects associated with the container. These claims are allowable at least by virtue of their dependence

from allowable independent Claims 1 and 21, and so a detailed discussion of the additional distinguishing features recited in these dependent claims is not presented at this time. Applicant reserves the right to present such arguments later during prosecution or on appeal.


Early and favorable action concerning this application is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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Date: March 24, 2011

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